

HANDBOOK OF PHONOLOGICAL DATA  
FROM A SAMPLE OF THE WORLD'S LANGUAGES

A Report of the Stanford Phonology Archive

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	500 Karen	500 Karen	500 Karen
		[h] <sup>61</sup>	
500	01 p		55 epsilon-dot
500	02 p-aspirated <sup>01</sup>	18 m	[schwa] <sup>06 66</sup>
500	03 b-implosive <sup>02</sup>	19 n	[schwa-over-short] <sup>67</sup>
500	04 t	20 n-palatal <sup>30</sup>	56 a
500	05 t-aspirated <sup>01</sup>	21 eng <sup>30</sup>	57 u <sup>07 08</sup>
500	06 d-implosive <sup>02</sup>	22 l	[upsilon] <sup>68</sup>
500	07 c <sup>30</sup>	23 r-approximant <sup>03</sup>	58 o <sup>08</sup>
500	08 c-aspirated <sup>01 30</sup>	[r-trill] <sup>62</sup>	59 o-open <sup>08</sup>
500	09 k	24 glottal stop	60 yod
500	10 k-aspirated <sup>01</sup>	25 h-voice <sup>30</sup>	[z-hacek] <sup>69</sup>
500	11 theta		(free)
500	12 s		61 w <sup>08</sup>
500	13 s-aspirated	51 i	
500	14 z <sup>30</sup>	[iota] <sup>63</sup>	81 high-rising <sup>11</sup>
500	15 s-hacek <sup>30</sup>	52 e <sup>04</sup>	[high-falling-creaky voice] <sup>12 70</sup>
500	16 x	53 epsilon	
	[x-velarized] <sup>60</sup>	[e-mid] <sup>64</sup>	82 mid-falling <sup>14</sup>
	[x-labialized] <sup>60</sup>	(free)	[mid-over-short] <sup>15 71</sup>
		[ash] <sup>65</sup>	
		(free)	83 lower-mid-falling-breathy
500	17 gamma	54 iota-bar <sup>05</sup>	[low-breathy voice-over-short] 15 18 71

500 \$a Karen \$b Sgaw \$d Tibeto-Burman \$e Burma \$f 850,000 \$g Merritt Ruhlen \$g John Crothers (editor)

500 \$a Jones, Robert B., Jr. \$b 1961 \$c Karen Linguistic Studies \$f University of California Publications in Linguistics, vol. 25. \$g Berkeley: University of California Press \$q Informant

500 \$a INTONATION \$A "By intonation is meant here any deviation, in the course of an utterance, from a mean mid pitch level as established by the tone of the first syllable of the utterance.... By far the most common intonational feature is a noticeable and steady lowering of the mean pitch level from the beginning to the end of the utterance. This intonation is most noticeable when two or more successive syllables have the same tone, or when two syllables having the same tone are separated by a weakly stressed syllable. Tones /high-rising/ and /mid-falling/ remain relatively distinct. The two falling tones, [high-falling-creaky voice] and /lower-mid-falling-breathy voice/, and the two stopped tones, [mid-over-short] and [low-breathy voice-over-short], frequently seem not to contrast in a given utterance, though they do contrast in different utterances.... Features of stress may also affect pitch levels and tonal contours." (p.13-14)

500 \$a MORPHEME STRUCTURE \$A There are quite a few disyllabic lexical items; many are obviously morphemically complex, but it is not clear on cursory inspection whether all are. [JHC]

500 \$a STRESS \$A "Stress here is defined simply as contrasting degrees of loudness. Three phonemic stresses are set up, though it seems likely that the secondary stress may eventually be found to be two phonemes rather than one. There are surely differences in loudness (allophones?) among the various occurrences of secondary stress, but it has not yet been possible to define the differences or even positively to identify them. The difficulty lies in finding minimal contrasts, which are necessary because of the tonal features. For example, [high-falling-creaky voice] always gives the impression of being more heavily stressed than any of the others." (p.11) Stress appears to have no lexical function. From the examples it appears to be correlated with syntactic structure (e.g. the main verb receives the so-called primary stress). [JHC]

- 500 \$a SYLLABLE \$A C(C)V(glottal stop)
- 500 \$a TONE \$A domain of tone: syllable \$A "There are three tones--high, mid, and low--each with two allophones depending on the presence or absence of final [glottal stop].... Though there are only three phonemic tones, the term 'tone' will be used to refer to any of the six allophones as a matter of convenience. Thus /high-rising/ and [high-falling-creaky voice] will both be referred to as tones, though they are in fact allophones of the same tone.... Every allophone has certain features in addition to pitch which distinguish it from all others." (p.9)
- 500 01 \$A The aspirated stops are "more strongly aspirated" than English aspirates. (p.6)
- 500 02 \$A "/b-implosive, d-implosive/ are prevoiced, i.e. voicing slightly precedes release of the stop, and includes concomitant pharyngealization [=laryngealization?--MRI]. In precise speech this prevoicing is sufficiently pronounced to produce implosive release." (p.6)
- 500 03 \$A The features of /r-approximant/ are not specified. It is described as "a voiced alveolar lenis spirant." (p.7)
- 500 04 \$A "/e/...has a slightly raised allophone" in the two tones with [glottal stop]. (p.8) It is not clear how this allophone differs from [iota], the allophone of /i/ in the same environment. [JHC]
- 500 05 \$A /iota-bar/ is "unrounded but with slight lip protrusion." (p.8)
- 500 06 \$A [schwa] is "slightly raised and fronted." (p.8)
- 500 07 \$A It is not clear that /u/ is tense.
- 500 08 \$A The back vowels and /w/ are accompanied by "lip protrusion." (p.6, 8)
- 500 11 \$A /high-rising/ is described as "high in pitch with a rise at the end." (p.9)
- 500 12 \$A [high-falling-creaky voice] is "accompanied by increasing glottal constriction of the vowel." It "begins at high pitch and falls to low." (p.9)
- 500 14 \$A /mid-falling/ is "mid in pitch with a slight drop at the end." (p.9)
- 500 15 \$A Tones ending in [glottal stop] are shorter than the others. (See p.10-11.)
- 500 16 \$A /lower-mid-falling-breathy voice/ is "accompanied by a somewhat 'open' breathy voice quality." It "begins slightly lower than mid pitch and falls to low, the drop being greater than that of /mid-falling/ but not so great as that of [high-falling-creaky voice]." (p.9)
- 500 18 \$A With /low-breathy voice-over-short/ "the vowel is terminated abruptly by glottal closure and is accompanied by 'open' breathy voice quality." (p.9)
- 500 30 \$A "The phonemes /z, h-voice, eng/ and the entire palatal series, with the exception of /yod/, are rare. In the data /z/ occurs only [once],.../eng/ occurs in two items, /s-hacek/ in three, /c-aspirated/ in four, /c/ in seven. All these items carry low functional loads semantically, except perhaps /c.o/ 'school.' /n-palatal/ occurs in only thirteen items and /h-voice/ in seven or eight, but both carry fairly high functional loads in terms of frequency of occurrence." (p.5-6)
- 500 60 \$A "/x/ has a lower high back unrounded offglide before /i, e, epsilon, epsilon-dot, a/ and a rounded offglide...before /o, o-open/. Both glides are accompanied by lip protrusion. There is no glide before /u, iota-bar/." (p.6)
- 500 61 \$A /gamma/ is realized as [h] "in syllables which have [high-rising], [high-falling-creaky voice], or [mid-over-short]." (p.6)
- 500 62 \$A /r-approximant/ is realized as [r-trill] as the second member of a consonant cluster. (p.7)
- 500 63 \$A /i/ is realized as [iota] in the two tones with final [glottal stop]. (p.8)
- 500 64 \$A "/epsilon/...has an occasional raised allophone with mid and low tones." (p.8)
- 500 65 \$A "/epsilon/...has...an occasional lowered allophone with the high tone." (p.8)
- 500 66 \$A /epsilon-dot/ is realized as [schwa] in the [mid-over-short] tone. (p.8)
- 500 67 \$A "/epsilon-dot/...is lax and short" in the two tones with [glottal stop] when unstressed. (p.8)
- 500 68 \$A "/u/...has a slightly lowered and relaxed allophone" in the two tones with [glottal stop]. (p.8)

- 500 69    \$A "/yod/ may in precise speech have a spirantal allophone" [z-hacek] in syllable initial position. As the second member of a consonant cluster it is never spirantal. (p.6)
- 500 70    \$A The /high-rising/ tone with syllable final /glottal stop/ is realized as [high-falling-creaky voice]. (p.9)
- 500 71    \$A The /mid-falling/ and /lower-mid-falling-breathy voice/ tones are realized as over-short level tones before syllable final /glottal stop/. (p.9)